

WHAT IS CLAIMED IS:

A transducer, comprising

 a base mountable on a substrate, and
 an input/output (I/O) lead configured to contact an I/O lead of an integrated circuit mounted on the substrate.

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- 2. The transducer of claim 1, wherein the transducer I/O lead is configured to electrically connect to the integrated circuit I/O lead independently of any electrically conductive path of the substrate.
- 3. The transducer of claim 1, wherein the transducer I/O lead is configured to contact the integrated circuit I/O lead at a transducer surface substantially parallel to a mounting surface of the substrate.
- 4. The transducer of claim 1, wherein the transducer I/O lead is configured to contact a pin I/O lead of the integrated circuit.
 - 5. The transducer of claim 1, wherein the transducer I/O lead is configured to contact a solder ball lead of the integrated circuit.
 - 6. The transducer of claim 1, wherein the transducer I/O lead is configured to contact the integrated circuit I/O lead at a transducer surface adjacent to a mounting surface of the substrate.
- 7. The transducer of claim 1, further comprising a power input lead connectable to a power line of the substrate.
- 1 8. The transducer of claim 1, further comprising a transductional 2 device.
- 9. The transducer of claim 1, wherein the transductional device is an opto-electronic device.
- 1 10. The transducer of claim 1, wherein the transductional device is an electronic device.
- Manager to an integrated circuit mounted on a substrate, comprising

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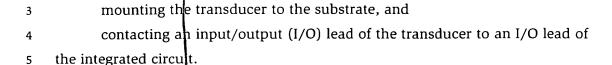
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- 1 12. The method of claim 11, wherein the transducer I/O lead electrically connects to the integrated circuit I/O lead independently of any electrically conductive path of the substrate.
- 1 13. The method of claim 11, wherein the transducer I/O lead contacts 2 the integrated circuit I/O lead at a transducer surface substantially parallel to a 3 mounting surface of the substrate.
- 1 14. The method of claim 11, wherein the transducer I/O lead contacts a pin I/O lead of the integrated circuit.
 - 15. The method of claim 11, wherein the transducer I/O lead contacts a solder ball lead of the integrated circuit.
- 1 16. The method of claim 11, wherein the transducer I/O lead contacts
 2 the integrated circuit I/O lead at a transducer surface adjacent to a mounting
 3 surface of the substrate.
 - 17. The method of claim 11, wherein the transducer connects to a power line of the substrate when the transducer is mounted to the substrate.
- 1 18. A system, comprising
- 2 a substrate,
- an integrated circuit mounted on the substrate and having an input/output (I/O) lead, and
- a transducer having an I/ lead configured to contact the I/O lead of the integrated circuit.
 - 19. The system of claim 18, wherein the transducer I/O lead is configured to electrically connect to the integrated circuit I/O lead independently of any electrically conductive path of the substrate.